

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<p>Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.</p> <p>Substitute for form 1449/PTO</p> <p>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p><i>(Use as many sheets as necessary)</i></p>				Complete if Known	
				Application Number	10/634,180
				Filing Date	August 5, 2003
				First Named Inventor	Bunker, et al
				Art Unit	1624
				Examiner Name	Deepak R. Rao
				Attorney Docket Number	PC25245A
Sheet	2	of	4		

[illegible]

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY			
		WO 02/34726	05-02-2002	Noe, et al		
		WO 02/34753	05-02-2002	Bronk, et al		
		EP 0935963	08-18-1999	McClure, et al		
		EP 1138680	10-04-2001	Noe		
		WO 99/64400	12-16-1999	Salituro, et al		
		EP 1069110 A	01-17-2001	Kimura, et al		

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	10/634,180	
			Filing Date	August 5, 2003	
			First Named Inventor	Bunker, et al	
			Art Unit	1624	
			Examiner Name	Rao, Deepak R.	
Sheet	3	of	4	Attorney Docket Number	PC25245A

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ²
		International Search Report from PCT/IB 03/03508.		
		Billinghurst, et al. "Comparison of the Degradation of Type II Collagen and Proteoglycan in Nasal and Articular Cartilages Induced by Interleukin-1 and the Selective Inhibition of Type II Collagen Cleavage by Collagenase", Arthritis & Rheumatism, March 2000, vol. 43, No. 3, pp. 664-672.		
		Office Action from 10/264,764 mailed 6.16.03.		
		Moy, et al. "High-resolution Solution Structure of the Catalytic Fragment of Human Collagenase-3 (MMP-13) Complexed with a Hydroxamic Acid Inhibitor", J. mol. Biol., (2000), 302, pp. 671-689.		
		Lovejoy, et al, "Crystal Structures of MMP-1 and -13 reveal the Structural Basis for Selectivity of Collagenase Inhibitors", Nature Structural Biology, Vol. 6, No. 3, March 1999, pp. 217-221.		
		Billinghurst, et al, "Enganced Cleavage of Type II Collagen by Collagenasees in Osteoarthritic Articular Cartilage", J. Clin. Invest., April 1997, Vol. 99, No. 7, pp. 1534-1545.		
		Chen, et al, "Structure-Based Design of a Novel, Potent, and Selective Inhibitor for MMP-13 Utilizing NMR Spectroscopy and Computer-Aided Molecular Design", J. Am. Chem. Soc., 2000, Vol. 122, pp. 9648-9654.		
		Wernicke, et al, "Cloning of Collagenase 3 from the Synovial Membrane and Its Expression in Rheumatoid Arthritis and Osteoarthritis", The Journal of Rheumatology, 1996, Vol. 23, No. 4, pp.590-595.		
		Mokrosz, et al, "Structure-activity relationship studies of CNS agents Part 10: 1-Aryl-2-[3-(4-aryl-1-piperazinyl)propyl]-1,4-dihydro-3(2 H)-isoquinolones: Two modes of the interaction with the 5-HT receptor site", Pharmazie, 1994, Vol. 49, pp. 328-333.		
		Reboul, et al "The New Collagenase, Collagenase-3, Is Expressed and Synthesized by Human Chondrocytes but not by Synoviocytes", J. Clin. Invest., Vol. 97, No. 9, May 1996 pp.2011-2019.		

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.
 This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO <h2 style="text-align: center;">INFORMATION DISCLOSURE STATEMENT BY APPLICANT</h2> <p style="text-align: center;"><i>(Use as many sheets as necessary)</i></p>		Complete if Known	
		Application Number	10/634,180
		Filing Date	August 5, 2003
		First Named Inventor	Bunker, et al
		Art Unit	1624
		Examiner Name	Rao, Deepak R.
		Attorney Docket Number	PC25245A
Sheet	4	of	4

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Neuhold, et al, "Postnatal expression in hyaline cartilage of constitutively active human collagenase-3 (MMP-13) induces osteoarthritis in mice", J. Clin. Invest., January 2001, Vol. 107, No. 1, pp. 35-44.	
		Mitchell, et al, "Cloning Expression, and Type II Collagenolytic Activity of Matrix Metalloproteinase-13 from Human Osteoarthritic Cartilage", J. Clin. Invest., February 1996, Vol. 97, No. 3, pp. 761-768.	
		Dahlberg, et al, "Selective Enhancement of Collagenase-Mediated Cleavage of Resident Type II Collagen in Cultured Osteoarthritic Cartilage and Arrest with a Synthetic Inhibitor That Spares Collagenase 1 (Matrix Metalloproteinase 1)", Arthritis & Rheumatism, March 2000, Vol. 43, No. 3, pp. 673-682.	
		Freemont, et al, "In situ zymographic localisation of type II collagen degrading activity in osteoarthritic human articular cartilage", Ann. Rheum. Dis., 1999, Vol. 58, pp. 357-365.	

Examiner Signature	Date Considered	
--------------------	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.